NWS FORM E-5 (11-88) **(PRES. by NWS Instruction 10-924)** **U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE**	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **March** YEAR **2017**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Bill Parker, Meteorologist In-Charge** DATE **05/31/2017**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

X **An X inside this box indicates that no river flooding occurred within this Hydrologic Service Area.**

Synopsis…

In the month of March, the HSA (Hydrologic Service Area) received between two and six inches of rainfall with the majority of the area receiving at least three inches. The March average is between four and five inches. The greatest amount of rain fell within the Sunflower River and the Big Black River basins. Meridian was the climate site that received above normal rainfall this month. The weather itself was very warm during March. The average temperature at all climate sites within the HSA ranged from 3.5° to 5.5° above normal.

Weather Highlights…

The month started out with a front pushing through the HSA on the 2nd. The front brought scattered rainfall with the highest total near one inch. The next system began to ramp up on the 6th and 7th as an upper low over the Northern Plains began to deepen. Warm air advection brought some light rainfall to the HSA on the 6th. As the cold front pushed through on the 7th, rainfall ranged from ½ to 2 inches.

Cold high pressure pushed into the Upper Plain States and then into the Ohio Valley. This propelled another cold front into the region on the 10th. The front pushed off of the Louisiana Coast by the morning of the 11th allowing cooler air to filter into the Gulf States. Low Pressure formed in the Northwest Gulf of Mexico and moved rapidly to the northeast across Coastal Mississippi on the 13th. The movement of low brought yet another cold front with reinforcing colder and drier conditions to the HSA. Rainfall ranged from ½ inch across the south to 3+ inches across Northeast Mississippi during this period. High pressure built into the region bringing with it highs in the 40s and 50s and lows in the 30s. A reinforcing dry back door cold front pushed across the area on the 18th and into the 19th. By the 20th, high pressure had shifted well east of the area allowing a significant warming trend.

By the 21st, another strong Canadian high pressure center pushed into the northern Plain States and drifted eastward from there. This allowed a dry, slowly southward drifting cold front to traverse the area from late on the 21st to the 23rd. As high pressure shifted eastward on the 24th, warm, moist Gulf air began to overtake the area.

On the 24th, a closed upper level low pressure system, with an associated cold front, slowly moved to Northwest Arkansas on the 25th. A squall line, well out ahead of the cold front, moved across Northeast Louisiana, Southeast Louisiana, and the Northwest Yazoo Delta early on the 25th bringing damaging winds and some small hail. The squall line progressed across the remainder of Mississippi during the day with some isolated wind damage and large hail reports.

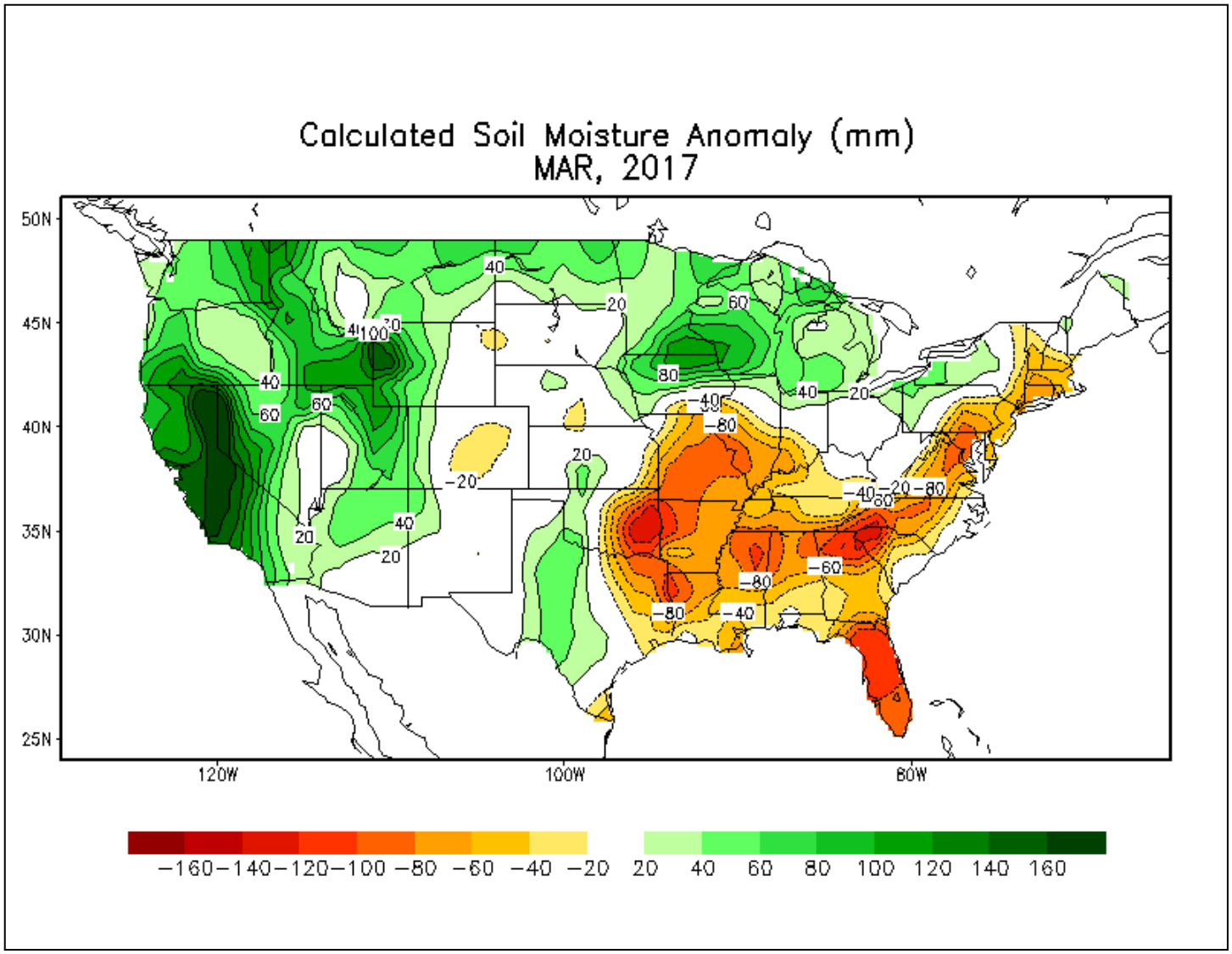
A series of upper level waves moved just north of the Gulf South bringing unsettled weather to the HSA through the 28th. Rainfall amounts during this time period ranged from 1 to 4 inches across much of the HSA. Large hail and

damaging winds were reported with a supercell thunderstorm along and south of Interstate 20 on the 27th.

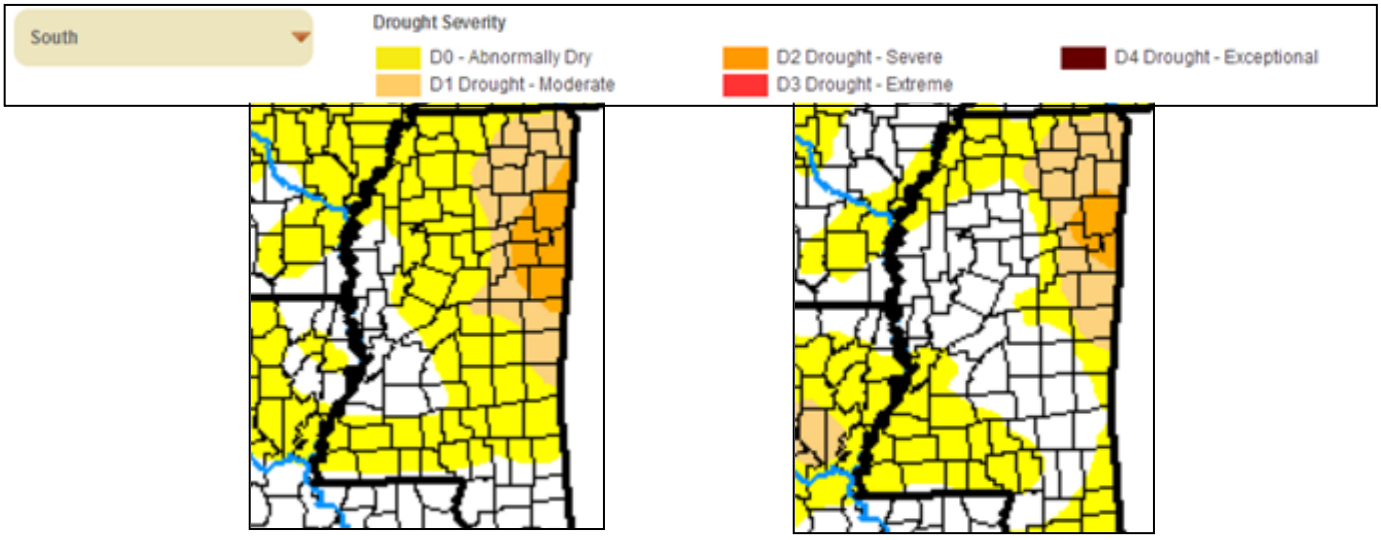
From the morning of the 28th to the 29th, another closed low began moving out of Arizona to the Texas Panhandle. By the 29th, a complex surface pattern was in place with a low across the Texas panhandle with a cold front extending south from there and a low over northeast Oklahoma with a warm front into North Mississippi. A strong warm, moist southerly flow streamed northward across the HSA ahead of the approaching system. A cold front moved across the region from the 30th until early on the 31st bringing heavy rainfall to the southern and central portions of Mississippi. Wind damage was reported across Northeast Louisiana and western and southern Mississippi. A brief, weak tornado touched down in Lamar County in Southeast Mississippi. Rainfall amounts ranged from less than a half inch across East Mississippi to 2 to 3 inches across southern portions of Northeast Louisiana and Southwest Mississippi.

River and Soil Conditions

Soil Moisture Map:



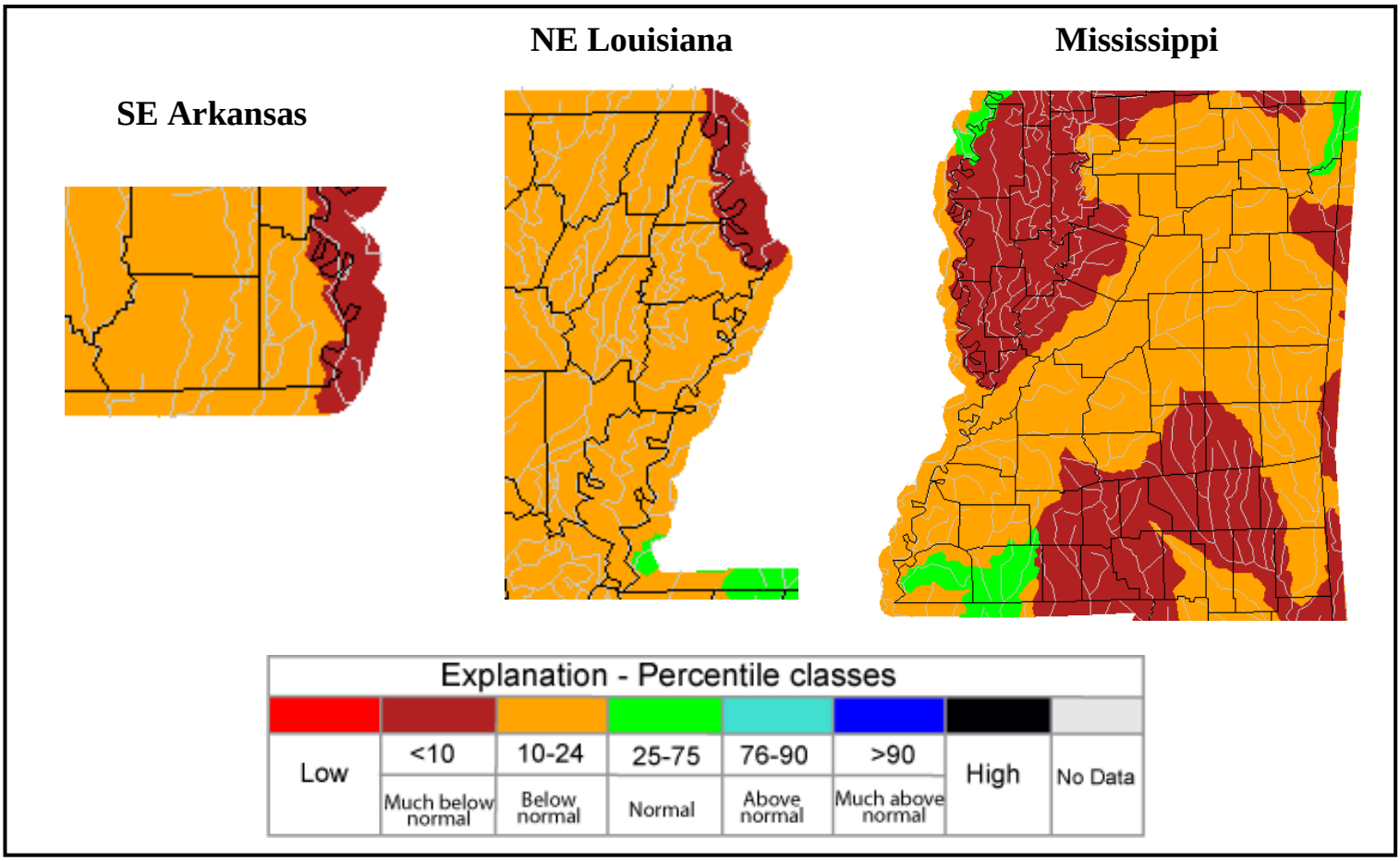
Drought Comparison:



March 1, 2017 **April 1, 2017**

Streamflow:

The United States Geological Survey's (USGS) March 2017 river streamflow records were compared with all historical March streamflow records. Below normal streamflow was seen everywhere throughout the HSA.



River Conditions:

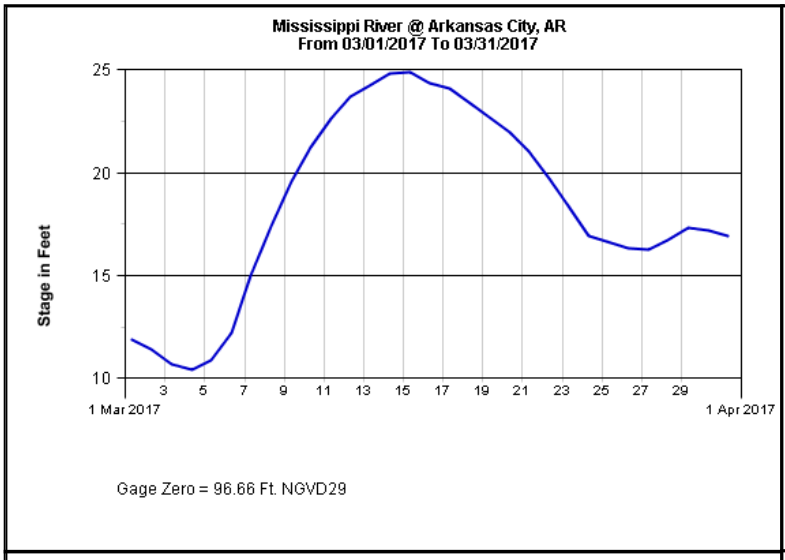
There was no river flooding during the month of March.

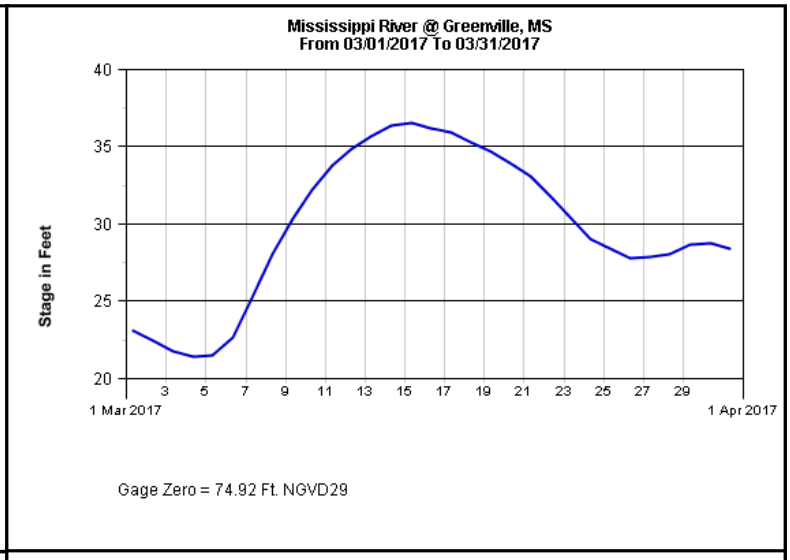
Climatic Outlook and Flood Potential:
The climatic outlook shows good chances for above normal temperatures over the next three months for the whole HSA. In regards to precipitation, the outlook indicates decent chances for below normal precip for the southern half of the HAS with equal chances for above, normal or below regular rainfall in the northern half of the HSA. Thus, based on current soil moisture, streamflow, and the 3-month climate outlook, the flood potentials are thus:

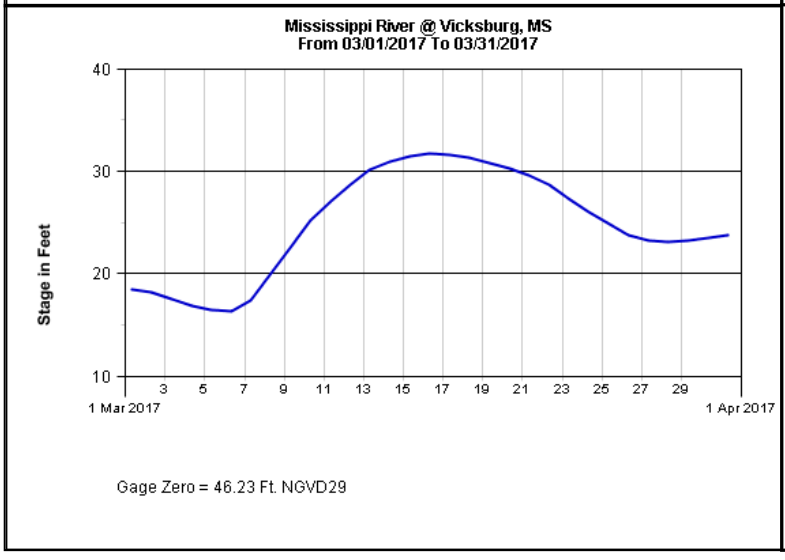
Pearl River System: Normal.
Yazoo River System: Normal.
Big Black River System: Normal.
Homochitto River System: Normal.
Pascagoula River System: Normal.
Northeast LA and Southeast AR: Normal.
Tombigbee River System: Normal.
Mississippi River: Normal.

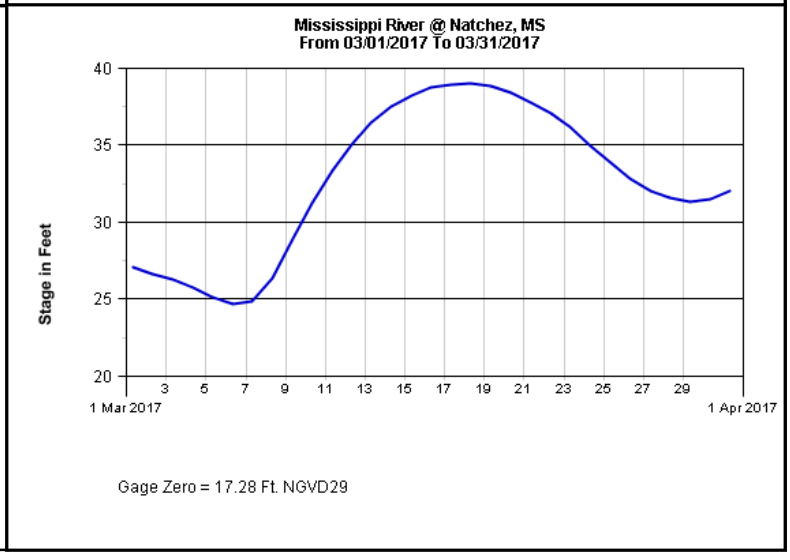
Mississippi River Plots March 2017
Plots Courtesy of the United States Army Corps of Engineers

Monthly Preliminary High and Low Stages:









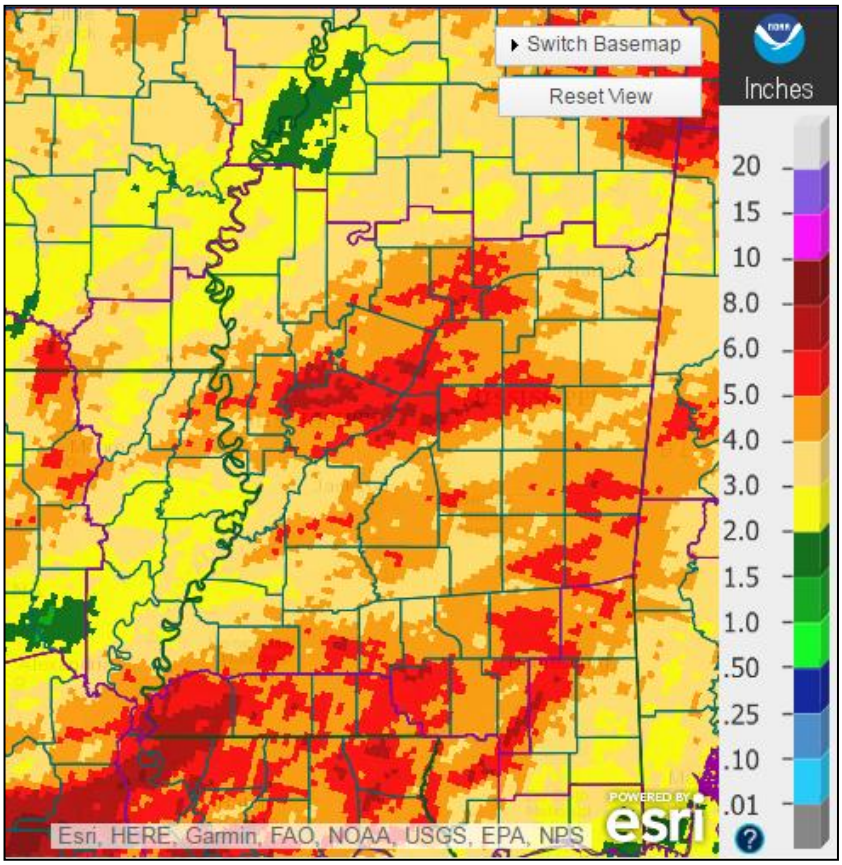
Location	Flood Stage (ft)	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City	**37**	**24.89**	**3/15**	**10.43**	**3/04**
Greenville	**48**	**36.57**	**3/15**	**21.39**	**3/04**
Vicksburg	**43**	**31.72**	**3/16**	**16.37**	**3/06**
Natchez	**48**	**39.04**	**3/18**	**24.70**	**3/06**

Rainfall for the Month of March

During the period from 7 am February 28th until 7 am March 31st, the largest rainfall amounts from NWS Cooperative Observers were:

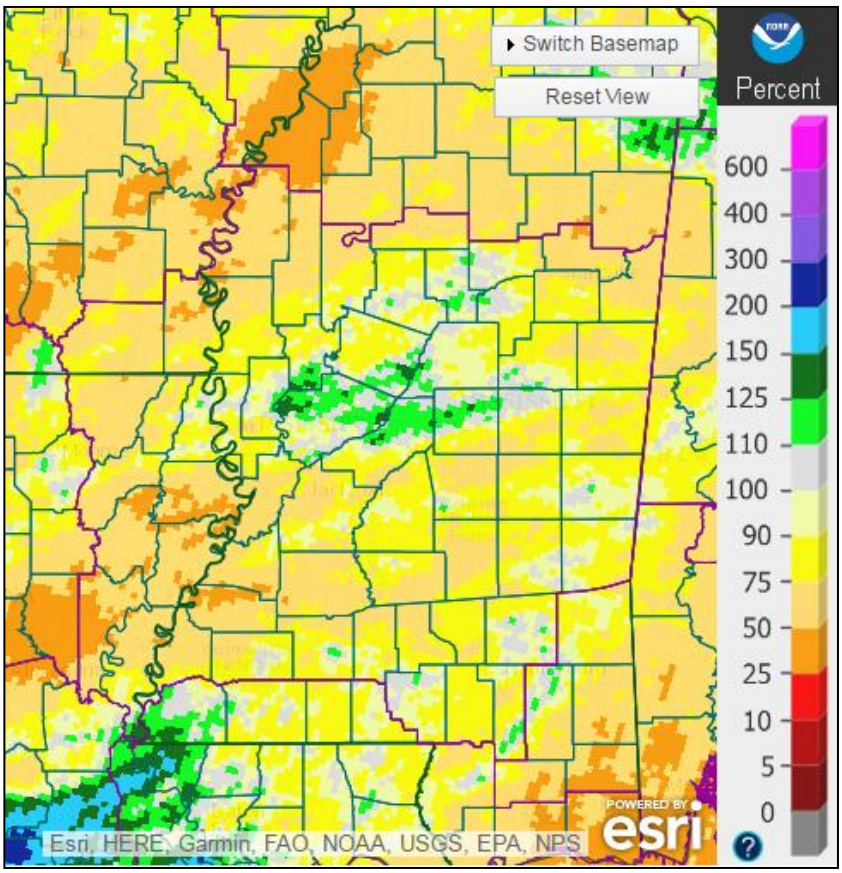
This will be updated at a later time

March Rainfall Estimates:



Note: Observer rainfall and MPE in March may differ due to time differences.

March Percent of Normal Precipitation:



Note: Observer rainfall and MPE in March may differ due to time differences.

March Rainfall for Selected Cities:

City (Airport)	Rainfall	Departure from Normal	2017 Rainfall	2017 Departure from Normal
Jackson (KJAN)	4.52	-0.52	14.73	-0.04
Meridian (KMEI)	5.77	+0.35	15.34	-0.81
Hattiesburg (KHBG)	3.14	-2.36	14.74	-1.89
Vicksburg (KTVR)	2.86	-2.17	9.62	-5.75
Greenville (KGLH)	1.86	-2.69	9.89	-4.65
Greenwood (KGWO)	3.97	-0.34	12.25	-1.00

Total Flood Warning products issued: 0
Total Flood Statement products issued: 0
Total Flood Advisories MS River: 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District